Amendments to the Specification:

Please amend the specification as follows:

Please replace the paragraphs at page 1, lines 1-30, with the following rewritten paragraphs:

~~DESCRIPTION~~

TITLE OF THE INVENTION

CONDITION ANALYSIS APPARATUS

BACKGROUND OF THE INVENTION

~~Technical Field~~ 1. Field of the Invention

[0001]

The present invention relates to a condition analysis apparatus, and in particular to a condition analysis apparatus capable of easily and accurately grasping the condition of an object.

~~Background Art~~ 2. Description of Related Art

[0002]

Movement detection sensors have so far been proposed as movement detection devices for detecting the movement of an object such as a person, in a space such as a bathroom. As a typical example, there has been a monitoring apparatus for monitoring the breath of a sleeping person on a bed by projecting a pattern onto the sleeping person on the bed, continuously taking an image of the projected pattern, and calculating the shift amount of the pattern from the image taken continuously (see Patent Document 1, for example).

[0003]

Patent Document 1: JP-A-2002-175582 (pp 5 - 9 and FIGs. 1 - 13)

~~Disclosure of the Invention~~

~~Problem to be Solved by the Invention~~

[0004]

With the conventional apparatus as described above, however, the condition of each part of the object, such as a moving direction, is difficult to accurately grasp.

SUMMARY OF THE INVENTION

[0005]

It is therefore an object of the present invention to provide a condition analysis apparatus capable of easily and accurately grasping the condition of an object.

Please replace the paragraph starting at page 5, line 4, with the following rewritten paragraphs:

~~Best Mode for Carrying Out the Invention~~Brief Description of the Drawings

[0100]

FIG. 1 is a schematic view of the external appearance of a monitoring apparatus according to an embodiment of the present invention.

FIG. 2 is a schematic view of the external appearance of the monitoring apparatus, using an FG sensor as a 3-D sensor, according to the embodiment of the present invention.

FIG. 3 is a schematic perspective view illustrating a projection device according to the embodiment of the present invention.

FIG. 4 is a block diagram showing an example of the construction of the monitoring apparatus according to the embodiment of the present invention.

FIG. 5 is a conceptual perspective view illustrating the concept of shifts of bright spots according to the embodiment of the present invention.

FIG. 6 is a schematic view illustrating the bright spots imaged on an image plane of FIG. 5.

FIG. 7 is a schematic view illustrating a 3-D shape generated by a 3-D shape generation section according to the embodiment of the present invention.

FIG. 8 is a schematic view of areas defined by the area definition section superimposed on the 3-D shape of FIG. 7, where FIG. 8(a) shows downward sampling-point-moves in the abdomen and FIG. 8(b) shows upward sampling-point-moves in the thorax.

FIG. 9 is a schematic view of areas defined by the area definition section superimposed on the 3-D shape of FIG. 7, with a boundary computed to define by the area definition section.

FIG. 10 is a graph of a waveform pattern representing breaths according to the embodiment of the present invention.

FIG. 11 is graphs of waveform patterns of the type of FIG. 10, representing normal and abnormal breaths.

FIG. 12 is a drawing showing a table of the names of diseases and the diseased locations corresponding to the waveform patterns representing the abnormal breaths of FIG. 11.

FIG. 13 is graphs of waveform patterns of the type of FIG. 10, representing breaths of sleep apnea syndrome.

FIG. 14 is a schematic view of the external appearance of a monitoring apparatus, using a plurality of bright lines as a light pattern projected by a projecting device, according to an embodiment of the present invention.

FIG. 15 is a schematic view illustrating the bright lines imaged on an image plane of FIG. 14.

Description of Reference Numerals and Symbols

[0101]

1: monitoring apparatus

2: person

3: bed

4: blanket

10: FG sensor (3-D sensor)

11: projection device

11a: pattern

11b: bright spot

12: image capturing apparatus

14: measurement device

20: computing device

21: control section

22: area definition section

23: 3-D shape generation section

24: output information generation section

25: movement discrimination section

26: anomaly determination section

40: display

102: flat surface

103: solid

105: light beam generation section

120: grating

121: optical fiber

122: FG element

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Please delete the paragraphs at page 35, line 21 to page 37, line 25.

Please replace page 38, line 1, with the following rewritten line:

~~**Claims**~~ **CLAIMS**